

ABSTRACT

A production method for a polycrystalline thin film, depositing polycrystalline thin film on a polycrystalline substrate. The temperature of the polycrystalline substrate is set within a range from 150°C to 250°C, the ion beam energy of the ion beam is adjusted within a range from 175 eV to 225 eV, and the ion beam is irradiated at an angle of incidence from 50° to 60° with respect to the normal for the film forming surface of the polycrystalline substrate. By this production method, the grain boundary inclination angle, formed by identical crystal axes of the crystal grains along a plane parallel to the film forming surface of the polycrystalline substrate, is limited to 20° or less, and a polycrystalline thin film having a strong crystal orientation can be stably produced.